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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/748,450	12/26/2000	Reinhard Buendgen	DE9-1999-0087	4189

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EXAMINER
ALI, SYED J

ART UNIT	PAPER NUMBER
2195	

DATE MAILED: 06/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *16 May 2005*.

2a) ☐ This action is **FINAL.**   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-16* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-16* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☒ All b) ☐ Some * c) ☐ None of:

      1. ☒ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection.   Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 16, 2005 has been entered. Claims 1-16 are presented for examination.

2.   The text of those sections of Title 35, U.S. code not included in this office action can be found in a prior office action.

Claim Rejections - 35 USC § 112

3.   **Claims 1-7 and 10-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

4.   As per claims 1-7, the phrase "at least one parallel method" is ambiguous, as the claim is directed to "a method." The redundancy of the claim language used leaves the claim in an ambiguous state, as the same word is used to convey different meanings. It is recommended that the "parallel method" be reworded, e.g. "parallel procedure" or "parallel routine".

5.   As per claims 10-11, the phrase "said method" conveys a meaning that is inconsistent

with the antecedent term. In line 3, the "method" appears to be a parallel procedure, while the

body of the claim indicates that the method is actually a series of steps, similar to the method of

claim 1. This ambiguity should be resolved by making it clear if the "method" is a series of steps

to obtain a useful result or a software procedure.

Claim Rejections - 35 USC § 101

6.   **Claims 10 and 12-16 are rejected under 35 U.S.C. 101 because the claimed invention
is directed to non-statutory subject matter.**

7.   The "computer program" of claim 10 is software per se. The computer program itself is

embodied wholly within software, and is not tangibly embodied. Similarly, the program library

of claim 11 and the parallel program managing tool of claim 16 are not tangibly embodied. Both

may be implemented entirely within software. Claims 13-15 are non-statutory for at least the

same reasons as their parent claim, as they fail to present any limitations that resolve the

deficiencies of the claim from which they depend.

Claim Rejections - 35 USC § 102

8.   **Claims 1-2, 6-11, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by
Bündgen et al. ("A Fine-Grained Parallel Completion Procedure") (hereinafter Bündgen).**

9.   As per claim 1, Bündgen teaches the invention as claimed, including a method for

running in parallel at least one parallel method called by a sequential caller program (§ 1.2; §

2.2), said method comprising:

issuing a dedicated parallelization call to a parallel program manager (§ 2.2; Fig. 2)

comprising all control information needed to allow for running said parallel method as a parallel

program (Fig. 2), wherein programming of said parallel program manager and said parallel

program are independent of the programming of said sequential caller program in at least one of

the following aspects: programming language, compilation, linkage, and hardware platforms (§

2.2).

10.   As per claim 2, Bündgen teaches the invention as claimed, including the method

according to claim 1 further comprising:

serializing input arguments for a subprogram means (Fig. 2, line 7); and

running said parallel method in parallel on one or more different machines yielding a

result (§ 2.2);

returning said result to the caller program (§ 2.2; Fig. 2, line 16); and

deserializing the result (Fig. 2, line 19).

11.   As per claim 6, Bündgen teaches the invention as claimed, including the method

according to claim 1 in which said dedicated parallelization call is done more than once during

the run of said caller program means (§ 3).

12.   As per claim 7, Bündgen teaches the invention as claimed, including the method
according to claim 6 in which parallelization parameters are selectable for each dedicated
parallelization call (§ 2.2; Fig. 2).

13.   As per claim 8, Bündgen teaches the invention as claimed, including the method
according to claim 2 further comprising the step of using a program library which comprises
program means for performing the steps of serializing input arguments, running said parallel
method in parallel, returning said result and deserializing the result (§ 2.2; Fig. 2).

14.   As per claim 9, Bündgen teaches the invention as claimed, including a distributed
computer system arranged for implementing the method of claim 1 (§ 5).

15.   As per claim 10, Bündgen teaches the invention as claimed, including a computer
program comprising code portions adapted for implementing the method of claim 1 (§ 5).

16.   As per claim 11, Bündgen teaches the invention as claimed, including a computer
program product stored on a computer usable medium comprising a computer readable program
for causing a computer to perform the method of claim 1 (§ 5).

17.   As per claim 16, Bündgen teaches the invention as claimed, including a parallel program
managing tool comprising program means for returning results from parallel executable
subprogram means to a sequential caller program (§ 2.2; Fig. 2) wherein programming of said

parallel executable subprogram means is independent of the programming of said sequential

caller program in at least one of the following aspects: programming language, compilation,

linkage, and hardware platforms (§ 2.2).

Claim Rejections - 35 USC § 103

18.   **Claims 3-5 and 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable**

over Bündgen in view of Goldberg et al. (USPN 6,571,232) (hereinafter Goldberg).

19.   As per claim 3, Goldberg teaches the invention as claimed, including the method

according to claim 1 further comprising the step of generating said parallel method with a script

program means which in turn is arranged to invoke a stream editor in order to fill a template

means with the code or the name of the method to be computed in parallel (col. 6 lines 41-63).

20.   It would have been obvious to one of ordinary skill in the art to combine Bündgen and

Goldberg since using a script to compile or translate programs into a form suitable for a

particular element can be used to preprocess actions, thus speeding up considerably the time it

takes to execute actions. Rather than waiting until the program is loaded onto a processing

element and then translating the code, the preprocessor generates the appropriate type of code

before sending the application out.

21.   As per claim 4, Goldberg teaches the invention as claimed, including the method

according to claim 3, further comprising the step of automatically generating an instantiation of

said template means (col. 3 lines 20-23).

22.   As per claim 5, Goldberg teaches the invention as claimed, including the method according to claim 4 in which a script is used for generating parallel subprograms (col. 6 lines 41-63).

23.   As per claim 12, Bündgen teaches the invention as claimed, including a program library comprising at least one of:

an implementation of an application interface for procedural parallel operating environment [POE] calls to a parallel program manager (§§ 2.2, 3; Fig. 2), wherein programming of said application interface is independent of the programming of said parallel program manager in at least one of the following aspects: programming language, compilation, linkage, and hardware platforms (§ 2.2).

24.   Goldberg teaches the invention as claimed, including template means for parallel subprogram means and script means for generating parallel subprograms (col. 6 lines 41-63).

25.   As per claim 13, Bündgen teaches the invention as claimed, including the library according to claim 12 which provides prerequisites to generate user library functions that make parallelism transparent to a caller of said user library functions (§ 2.2).

26.   As per claim 14, Bündgen teaches the invention as claimed, including a user library generated by means of the library according to claim 12 (§ 2.2).

27.   As per claim 15, Bündgen teaches the invention as claimed, including the library

according to claim 12 which said library is a dynamic link library (§ 2.2).

Response to Arguments

28.   **Applicant's arguments with respect to claims 1-16 have been considered but are**

moot in view of the new grounds of rejection.

Conclusion

29.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Syed J Ali whose telephone number is (571) 272-3769. The

examiner can normally be reached on Mon-Fri 8-5:30, 2nd Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Meng-Ai T An can be reached on (571) 272-3756. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Syed Ali
June 15, 2005

MENG-AI T. AN
SUPERVISORY PATENT EXAMINER